



Based on the
TV series

COPS™

Tips on Using the COPS Self-Test

Supplement to the COPS Operator's Manual (TM-398)

THE GUN CALIBRATION procedure in the Cops™ game was designed differently from similar procedures in other games. This supplement explains the procedure in more detail than what is printed on page 2-4 of the *COPS Operator's Manual*. It is *very* important that the gun is correctly calibrated, since this adjustment directly affects earnings. The alignment has been set at the factory. It should not require adjustment unless a new COPS Logic PCB or gun has been installed. ❖ In addition, this game has a different NTSC board than is shown in the

COPS Operator's Manual. Therefore, this supplement includes revised Figure 5-1 (Game Wiring Diagram, sheets 2 and 3), Figure 4-2 (Cabinet-Mounted Assemblies, Rear View), and video adjustment procedure. ❖ Also, the gas pedal has been deactivated in the drive mode, to improve the game play.

If you need technical assistance,
call your distributor or
Atari Games Customer Service at:

(408) 434-3950

Atari Games Corporation,
737 Sycamore Drive, Milpitas, CA 95035
(Monday-Friday, 7:30 a.m.-4:00 p.m. Pacific time)

New Gun Alignment Procedure

CAUTION

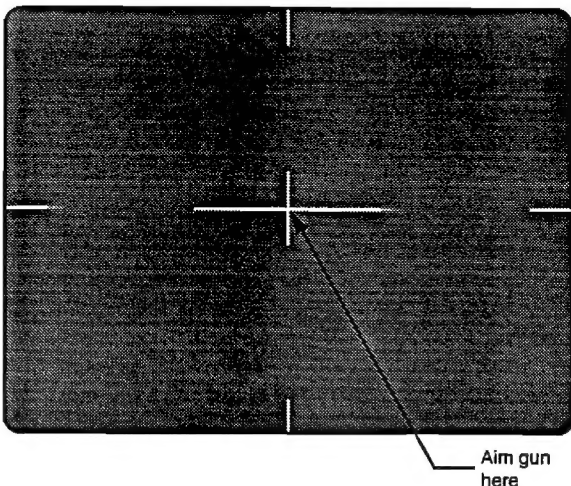
Do not start this alignment procedure unless the gun is really misaligned. Once the alignment has been set correctly, it will stay that way unless you replace the COPS Logic PCB or the gun. Please read through this procedure carefully and understand the instructions before beginning.

Preliminary Steps

1. To enter the Test Mode, press the Service switch located inside the coin door.
2. Press A so that the Set-Up screen appears.
3. Press C once to start the set-up. A frame and crosshairs appear on the screen.
4. Press B twice slowly until *Gun Setup* appears in the alphanumeric display.
5. Press C to start the gun set-up.

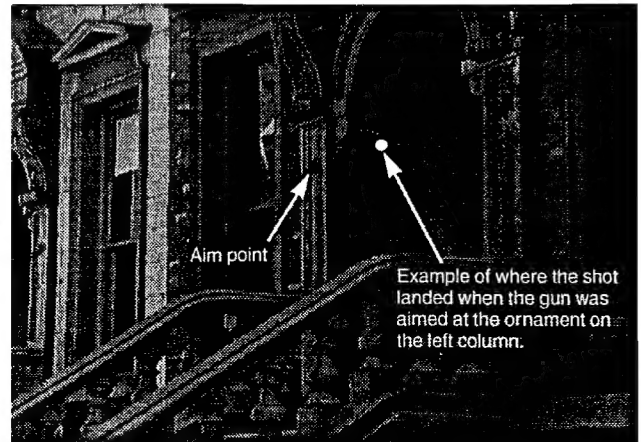
Gun Set-Up Procedure

1. *Shoot Centre* appears on the alphanumeric display. While seated in the game, hold the gun approximately 18 inches away from the screen. Aim at the center of the crosshairs in the middle of the screen; pull the trigger. (See Figure 1.)



**Figure 1 Gun Aiming Location
(Center of Crosshairs)**

2. *Test Aim* now appears on the alphanumeric display. The video now displays a building exterior: see Figure 2. Shoot the gun at the center of the screen (at the midpoint of the left column), and note the display of the shot fired in relation to where you aimed the gun.



**Figure 2 Example of Where Shot Landed
When Gun Was Aimed at Center of Screen**

As an example for this test, we will use the shot's position as 2 inches to the right and 1 inch up from the gun's aim point. *This is only an example: your results may vary.*

3. **Press B** and aim the gun at the *Shoot Centre* crosshairs screen, about half the distance it is off in the opposite direction of the error. This avoids over-correcting the aim.

In this example it would be 1 inch to the left and 1/2 inch down from the center of the crosshairs:

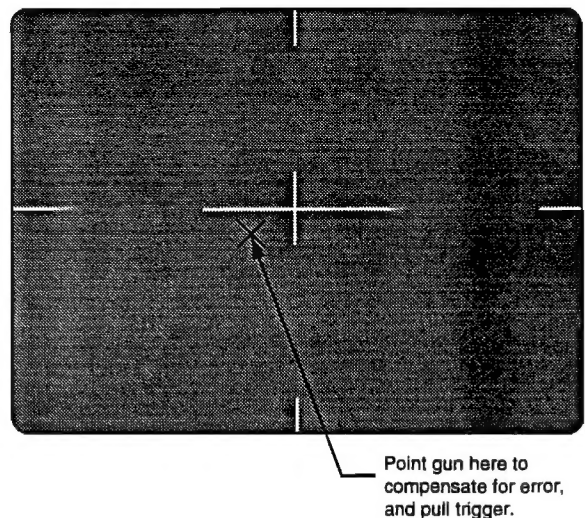


Figure 3 Location of Correction Shot

NOTE

When using this procedure, always use the last position fired as a reference. The game will not "remember" anything before the last shot fired in the Shoot Centre screen. This is especially important when making fine adjustments towards the end of the procedure. We recommend you exit from and re-enter the gun setup test if you feel you are getting lost with this procedure.

4. In the *Test Aim* building scene, shoot at the center of the screen. Again, use the approximate midpoint of the left column of the building as a center reference, and various points around the screen to test the gun's aim.
5. Repeat steps 3 and 4, gradually increasing the correction distance in step 3, if necessary, until the gun's error is minimized.
6. **Press C to lock in the setting. Otherwise all adjustments will be lost.** *Set Up Complete* will appear on the alphanumeric display.

Final Steps

1. Press A or B to re-enter the menu.
2. Press the Service button once to exit the test.
3. Press and hold the Service switch for several seconds to exit the Test Mode and re-enter the laser player, CD-ROM, and checksum tests. After about 20 seconds, the game will go into the attract mode and be ready for play.

New Video Adjustment Procedure

The COPS game now has two video control boards that replace the single NTSC Decoder PCB shown on page 4-4 of the *COPS Operator's Manual*. The two new boards are the NTSC Decoder Board and the Video Interface Board.

Due to this change, on the following pages are the revised game wiring diagrams (sheets 2 and 3 only) and the revised cabinet-mounted assemblies drawing. We recommend you keep this supplement with your *COPS Operator's Manual*.

The two new boards require a different video adjustment procedure, should you ever need to correct or improve the Hantarex Polo screen image. Follow this procedure:

Video Interface Board**NOTE**

This procedure is done at the Atari Games factory. However, if you ever replace the Remote Control Board in your Cops game, you would need to do this procedure yourself.

1. **Test Mode:** Enter the test mode by moving the shunt on the Test header to the on position. Verify that you see a white raster on the screen.
2. **Contrast Setting*:** Adjust the contrast control (RV405) on the Remote Control Board to display a white raster on the screen.
3. **Disable Controls*:** Disable the controls on this board by removing the control stems from the brightness (RV406) and contrast (RV405) controls.
4. **Test Mode:** Move the shunt on the Test header back to the off position.

NTSC Decoder Board

1. **Brightness:** Adjust the brightness (BRI) and contrast (PIC) controls until the brightness range of video display images looks normal. This adjustment should be done using both day and night scenes from the game's laser disc.
2. **Color:** Adjust the color level (COLOR) and tint (HUE) controls until the color saturation and the color tones of the video display images look normal. This adjustment should be done using scenes with characters to verify that the skin tones are set correctly. Also check the green color in the night scope scene (this appears 10 seconds from the beginning of the attract mode).
3. **Noise Rejection:** Adjust the detail sharpness (SHP) control until the chroma noise in the video image is minimized. The picture should appear sharp (in focus) without excessive noise visible.

Revised Gas Pedal Wiring

To improve game play, the gas pedal switch is shorted closed at all times. This avoids players causing a braking effect when lifting their feet off the gas pedal, which could negatively affect game play.



TIME WARNER INTERACTIVE

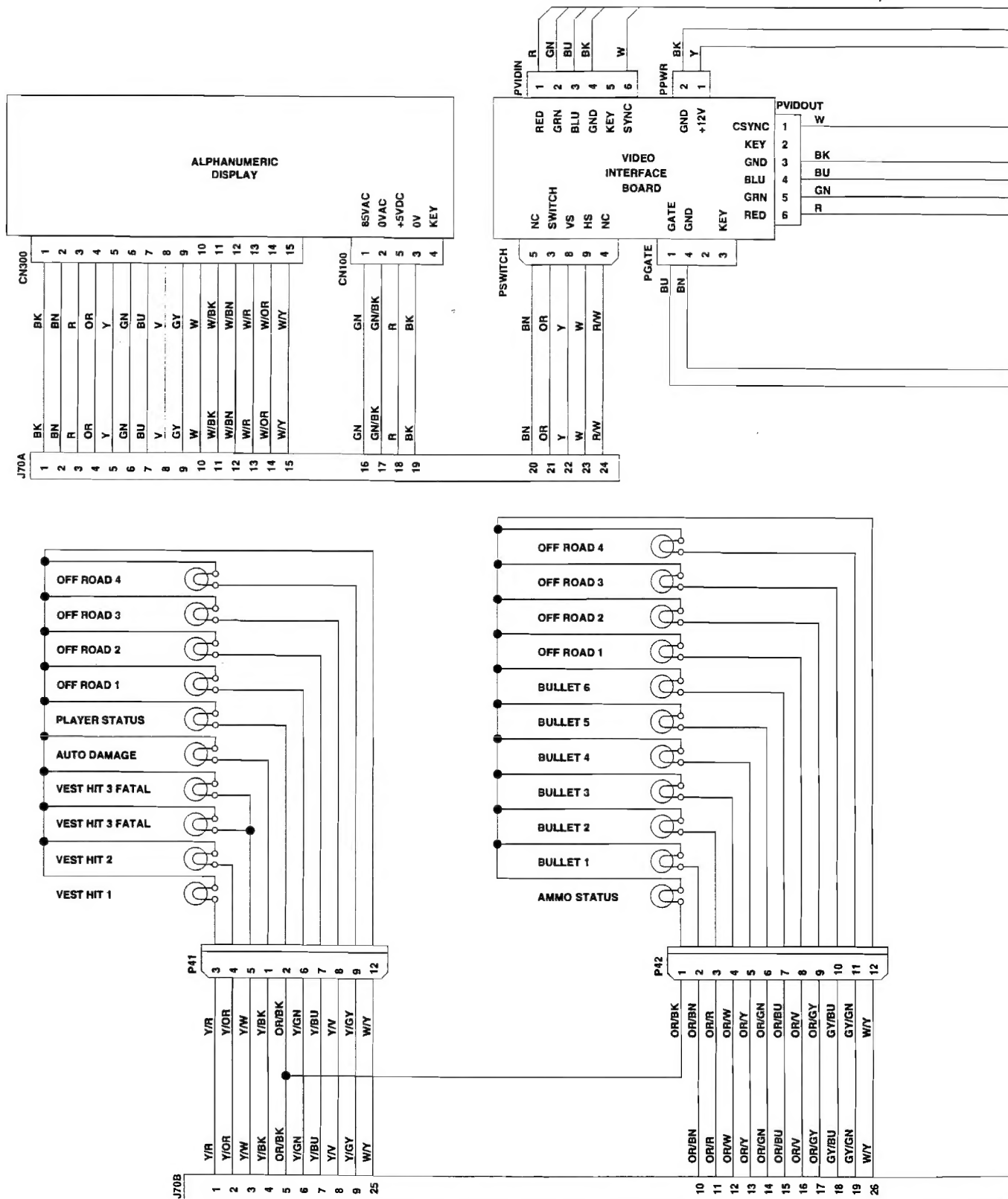


Figure 5-1 Game Wiring Diagram, Sheet 2 (revised)

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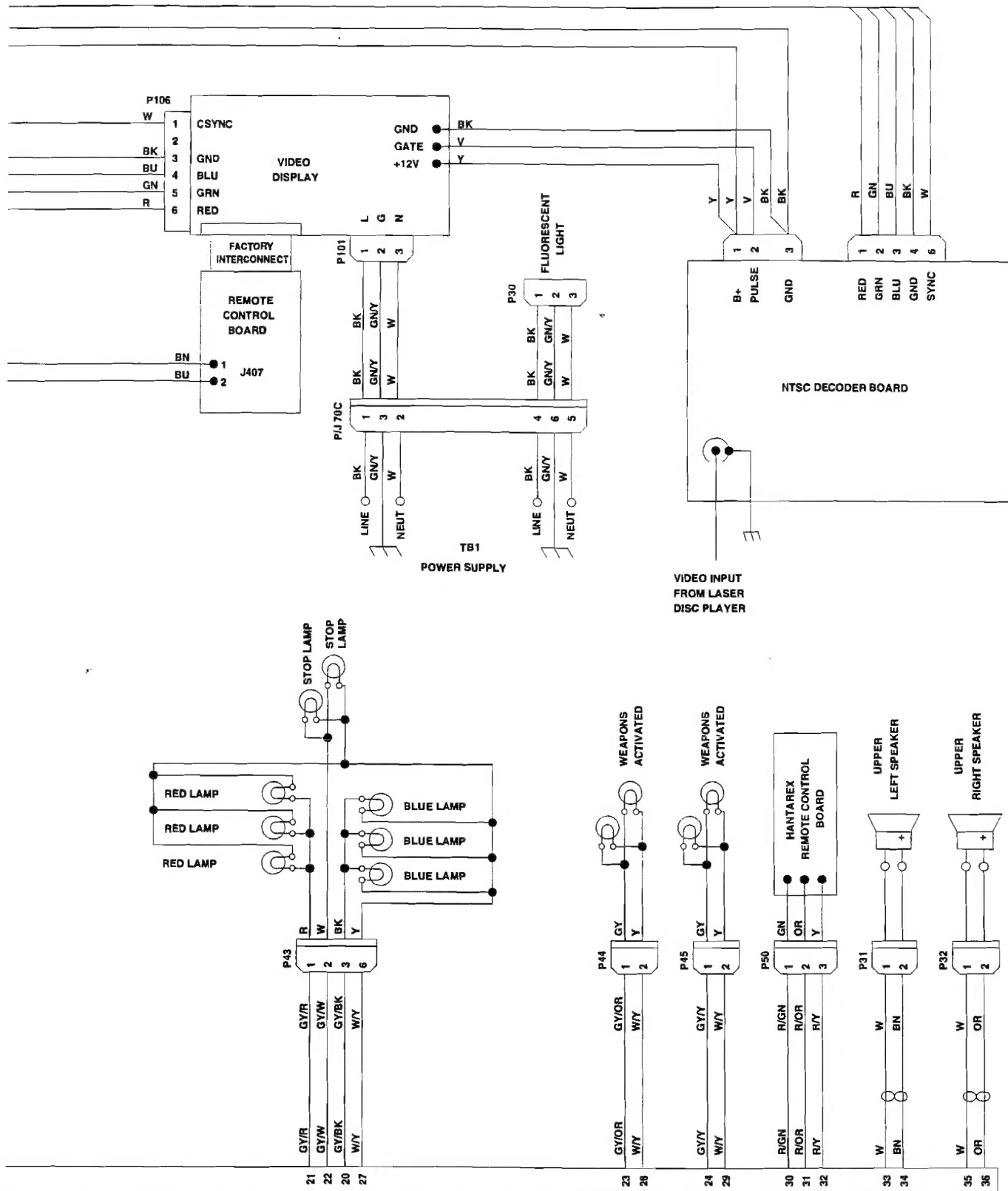


Figure 5-1 Game Wiring Diagram, Sheet 2 (revised)

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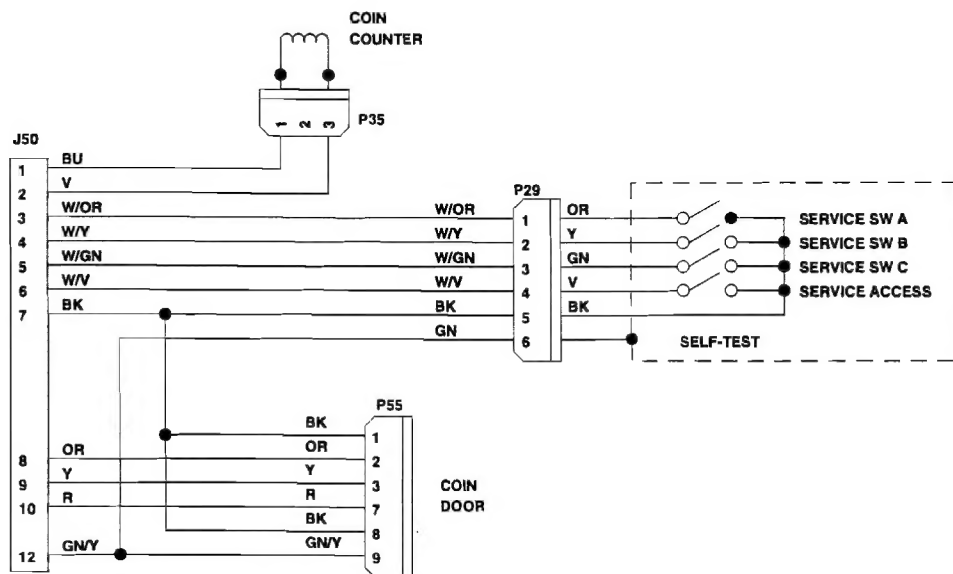
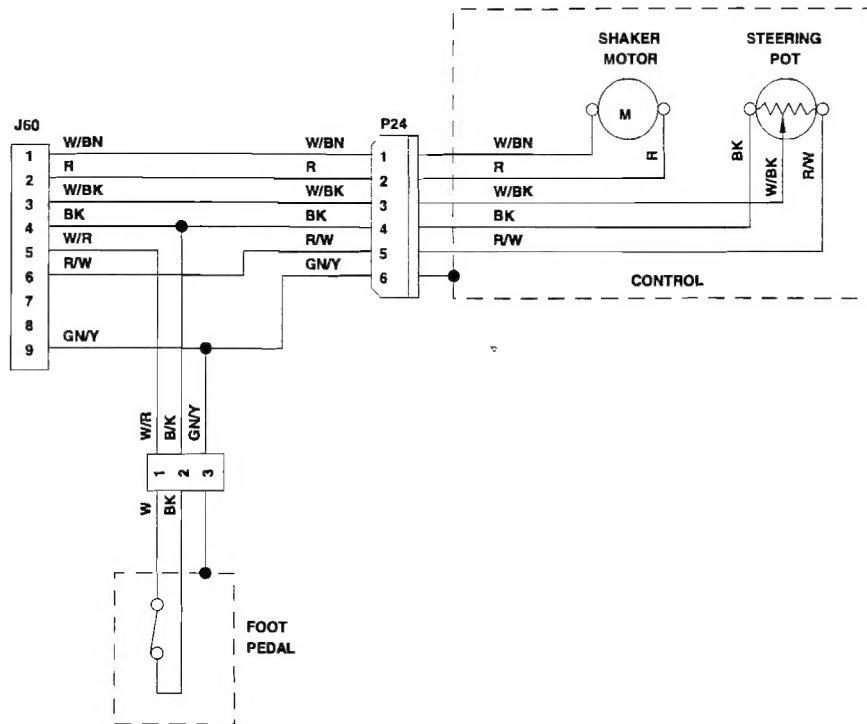


Figure 5-1 Game Wiring Diagram, Sheet 3 (revised)

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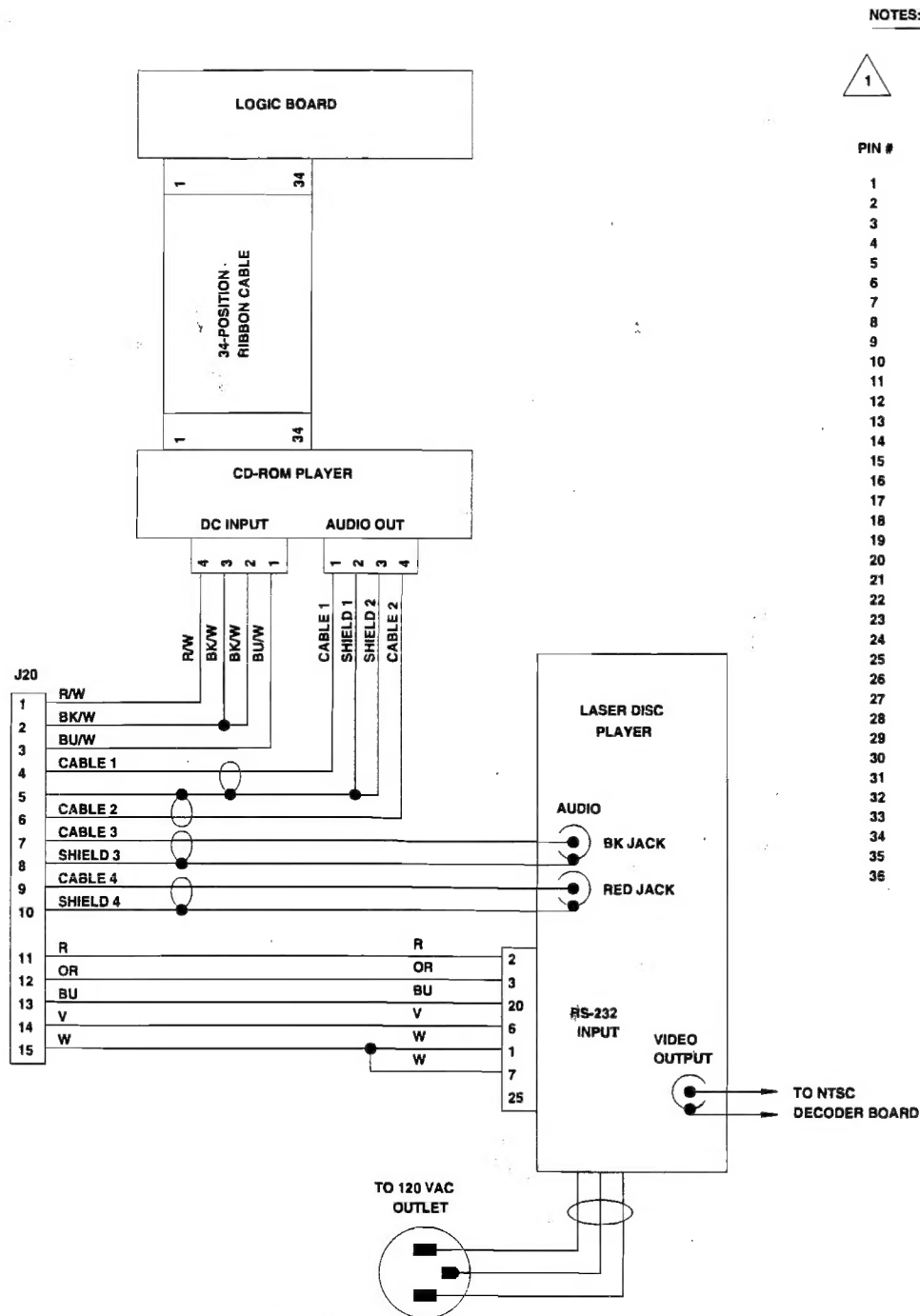


Figure 5-1 Game Wiring Diagram, Sheet 3 (revised)

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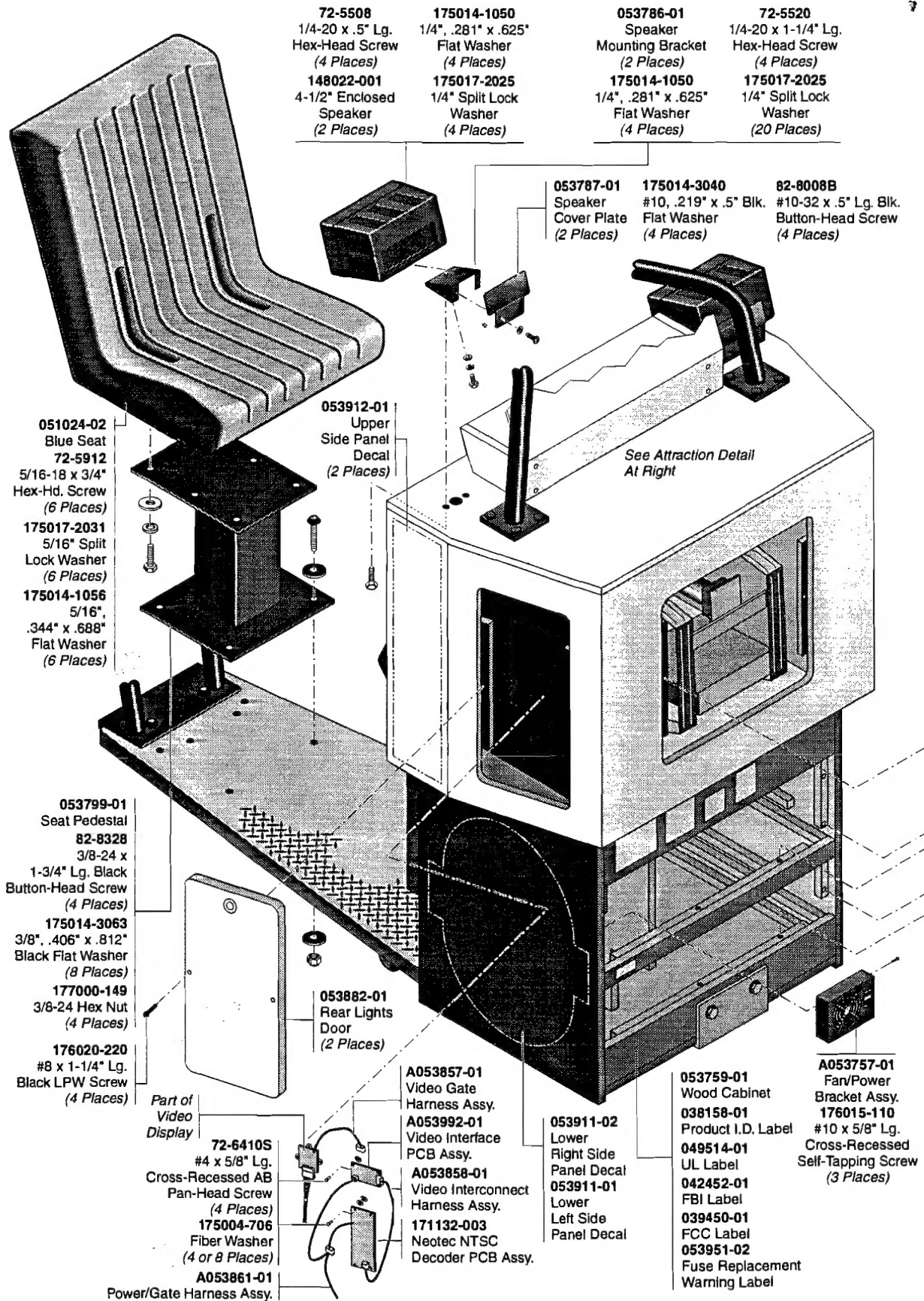


Figure 4-2 Cabinet-Mounted Assemblies, Rear View (revised)

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